

# Montana Board of Oil and Gas Conservation

## Environmental Assessment

**Operator:** Oasis Petroleum North America LLC  
**Well Name/Number:** Matador Federal 2658 43-7H  
**Location:** SW SE Section 7 T26N R58E  
**County:** Richland, MT; Field (or Wildcat) Wildcat

### Air Quality

(possible concerns)

Long drilling time: No, 30-40 days drilling time.

Unusually deep drilling (high horsepower rig): Triple derrick drilling rig to drill a single lateral horizontal Bakken Formation test, 19,904' MD/10,162' TVD.

Possible H2S gas production: Yes, slight H2S possible from Mississippian Formations.

In/near Class I air quality area: No Class I air quality area nearby.

Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211.

Mitigation:

☒ Air quality permit (AQB review)

☒ Gas plants/pipelines available for sour gas

☐ Special equipment/procedures requirements

☐ Other: \_\_\_\_\_

Comments: If there are existing pipelines for natural gas in the area then associated gas must be tied into system or if no gathering system nearby associated gas can be flared under Board Rule 36.22.1220.

### Water Quality

(possible concerns)

Salt/oil based mud: Yes will drill with oil based invert drilling fluids for the intermediate casing hole. Horizontal hole will be drilled with saltwater. Surface casing hole will be drilled with freshwater and freshwater mud system, Rule 36.22.1001.

High water table: No high water table anticipated at this surface location.

Surface drainage leads to live water: No, closest drainages are unnamed ephemeral tributary drainages to the Missouri River, adjacent to this drilling location. The Missouri River is about 1.7 miles to the north northeast from this location.

Water well contamination: No, closest water wells are relatively deep ranging up to 1400' in Fox Hills. This proposed oil well will be drilled with freshwater and freshwater mud to 1,779' (well below Fox Hills) and steel surface casing will be run and cemented to surface to protect groundwater.

Porous/permeable soils: No, sandy silty clay soils.

Class I stream drainage: Closest Class I stream drainage is the Missouri River, about 1.7 miles to the north northeast from this location.

Mitigation:

☒ Lined reserve pit

☒ Adequate surface casing

☐ Berms/dykes, re-routed drainage

☐ Closed mud system

☒ Off-site disposal of solids/liquids (in approved facility)

☐ Other: \_\_\_\_\_

Comments: 1,779' surface casing will be drilled with freshwater, steel casing will be run and cemented back to surface, to protect freshwater zones in adjacent water wells, Rule 36.22.1001. Also, covering Fox Hills aquifer. Adequate surface casing and BOP equipment to prevent problems, (5,000

psig annular and double ram), Rule 36.22.1014.

### **Soils/Vegetation/Land Use**

(possible concerns)

Stream crossings: No stream crossings anticipated. Crossing only ephemeral drainages over existing county roads.

High erosion potential: Possible high erosion potential on cut and fill slopes, location will require a substantial cut and fill.

Loss of soil productivity: No, location to be restored after drilling, if nonproductive. If productive unused portion of this drillsite will be reclaimed.

Unusually large wellsite: Yes, a large well site 430' X 320' for a single wellsite.

Damage to improvements: Slight-- surface use appears to be grass lands.

Conflict with existing land use/values: Slight

#### **Mitigation**

☐ Avoid improvements (topographic tolerance)

☐ Exception location requested

☒ Stockpile topsoil

☐ Stream Crossing Permit (other agency review)

☒ Reclaim unused part of wellsite if productive

☐ Special construction methods to enhance reclamation

☒ Other Requires DEQ General Permit for Storm Water Discharge Associated with Construction Activity, under ARM 17.30.1102(28).

Comments: Access will be over existing county road. New access road will be built into this location, from an existing lease road. Oil based invert drilling fluids will be recycled. Completion fluids will hauled to a commercial Class II disposal. Cuttings and solids will be buried/solidified on site in the lined reserve pit. The pit will be allowed to dry and the pit backfilled. No concerns.

### **Health Hazards/Noise**

(possible concerns)

Proximity to public facilities/residences: Nearest residences are several miles away.

Possibility of H<sub>2</sub>S: Yes, slight from Mississippian Formations.

Size of rig/length of drilling time: Triple drilling rig 30 to 40 days drilling time.

#### **Mitigation:**

☒ Proper BOP equipment

☐ Topographic sound barriers

☐ H<sub>2</sub>S contingency and/or evacuation plan

☐ Special equipment/procedures requirements

☐ Other: \_\_\_\_\_

Comments: Adequate surface casing cemented to surface, Rule 36.22.1001, with working BOP stack should mitigate any problems, (5,000 psig annular and double ram), Rule 36.22.1014.

### **Wildlife/recreation**

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: None identified.

Creation of new access to wildlife habitat: No

Conflict with game range/refuge management: No

Threatened or endangered Species: Species identified as threatened or endangered are the Pallid Sturgeon, Interior Least Tern, Whooping Crane and Piping Plover. Candidate species is the Sprague's Pipit. NH tracker website indicates the following thirteen (13) species of concern are as follows: Great Blue Heron, Piping Plover, Whooping Crane, Least Tern, Northern Redbelly Dace, Blue Sucker, Iowa Darter, Short Nosed Gar, Sturgeon Chub, Sicklefin Chub, Paddlefish, Sauger and Pallid Sturgeon. NH

tracker website lists one (1) potential species of concern: Hayden's Shrew.

Mitigation:

☐ Avoidance (topographic tolerance/exception)

☒ Other agency review (DFWP, **federal agencies**, DSL)

☐ Screening/fencing of pits, drillsite

☐ Other: \_\_\_\_\_

Comments: Private surface land. There maybe species of concern that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to what he would like done, if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands.

### Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites: None identified.

Mitigation

☐ avoidance (topographic tolerance, location exception)

☒ other agency review (SHPO, DSL, **federal agencies**)

☐ Other: \_\_\_\_\_

Comments: Private surface land. There may be possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. The Board of Oil & Gas has no jurisdiction over private surface lands.

### Social/Economic

(possible concerns)

☐ Substantial effect on tax base

☐ Create demand for new governmental services

☐ Population increase or relocation

Comments: Wildcat well. No concerns

### Remarks or Special Concerns for this site

A wildcat exploratory single lateral horizontal Bakken Formation test, 20,985' MD/10,195' TVD.

### Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected, some short term impacts will occur, but can be mitigated. Location is on federal (BLM) surface a federal EA has been prepared and BLM has issued a permit for this location.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/ Thomas Richmond

(title:) Administrator

Date: August 13, 2013

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website  
(Name and Agency)  
Richland County water wells  
(subject discussed)  
August 13, 2013  
(date)

US Fish and Wildlife, Region 6 website  
(Name and Agency)  
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA  
COUNTIES, Richland County, Montana  
(subject discussed)

December 2, 2012 (by Sasaki for nearby EA)  
(date)

Montana Natural Heritage Program Website  
(Name and Agency)  
Heritage State Rank= S1, S2, S3, Location T26N R58E  
(subject discussed)

December 2, 2012 (by Sasaki for nearby ea)  
(date)

If location was inspected before permit approval:

Inspection date: \_\_\_\_\_

Inspector: \_\_\_\_\_

Others present during inspection: \_\_\_\_\_